**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
ALEXANDRIA DIVISION**

WIAV SOLUTIONS, LLC,

      Plaintiff,

    v.

MOTOROLA MOBILITY, INC., et al.

      Defendants.

Civil Action No. 3:09-cv-447-LO

FILED UNDER SEAL

**DEFENDANTS' MEMORANDUM IN SUPPORT OF THEIR MOTION FOR
SUMMARY JUDGMENT THAT THE ASSERTED CLAIMS OF THE
'493 PATENT ARE INVALID AND THE ASSERTED CLAIMS OF
THE PATENTS-IN-SUIT ARE NOT INFRINGED**

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INTRODUCTION

Defendants move for summary judgment of noninfringement on all patents-in-suit and for invalidity of the '493 patent.

A. The Pitch Lag Patents are Not Infringed and the '493 Patent Is Invalid as a Matter of Law

This motion addresses two dispositive points relating to the "Pitch Lag Patents" (the '493 and '814 patents). First, all asserted claims of the '493 patent are invalid for anticipation because the claims are not entitled to a priority date before 2005 as a matter of law, and a patent issued more than one year earlier discloses all elements of the asserted claims. Second, WiAV cannot prove infringement of the Pitch Lag Patents because there is no evidence that the Defendants' accused products ever use the particular mode of operation that WiAV accuses of infringement (*i.e.*, "AMR10.2"). Additionally, no Defendant indirectly infringes the Pitch Lag Patents because the accused products have substantial noninfringing uses, and there is no evidence showing that Defendants know that the wireless carriers use the accused mode in the United States.

Anticipation. The '493 patent is invalid for anticipation under 35 U.S.C. § 102(b) because it claims an invention that WiAV admits was fully disclosed in the '814 patent, which issued more than one year before the effective filing date of the '493 patent. In an effort to avoid anticipation, WiAV argues that it is entitled to a priority date based on an earlier application in the chain that was filed in 1998. But WiAV's priority claim fails because there is a break in the chain of applications on which WiAV relies because one of the applications in the chain, filed in 2000, indisputably fails to disclose the '493 patent's claimed invention.

To obtain a priority date from an earlier application, "***each application in the chain*** leading back to [that] earlier application must comply with the written description requirement of

35 U.S.C. § 112." *Lockwood v. Am. Airlines, Inc.*, 107 F.3d 1565, 1572 (Fed. Cir. 1997) (emphasis added). WiAV cannot meet that requirement. Nothing in the text of the intervening 2000 application describes the '493 patent's claimed invention. WiAV has never contended otherwise. Instead, it argues that the 2000 application ***indirectly*** describes the claimed invention by purportedly "incorporating by reference" a ***different*** application describing the invention. But the 2000 application merely ***refers*** to that other application, and a "mere reference to another application . . . is not an incorporation of anything.*" Callaway Golf Co. v. Acushnet Co.,* 576 F.3d 1331, 1346 (Fed.Cir.2009) (emphasis added). Thus, as a matter of law, the '493 patent cannot claim priority before 2005, and is therefore anticipated by the '814 patent.

Noninfringement. WiAV also cannot meet its burden of proving that either of the Pitch Lag Patents is infringed. WiAV accuses only *one* out of nine possible modes of operation of Defendants' accused products of infringing the claims of the Pitch Lag Patents. Yet, it is undisputed that this allegedly infringing mode is ***never*** used in 3G networks. Furthermore, it is undisputed that this allegedly infringing mode is only used in a minuscule portion of 2G networks in the United States in any significant number of calls. The use of the accused AMR10.2 is so small that WiAV cannot show that any of the Defendants' accused products—as opposed to the tens of millions of Apple, RIM, HTC, LG, Samsung, and other un-accused products that are also in use in the United States—actually use the accused mode. WiAV's inability to prove such use by any of Defendants' accused products means that its direct infringement claims cannot survive summary judgment.

WiAV's indirect infringement claims (*i.e.*, contributory infringement and induced infringement) also fail as a matter of law. Proof of indirect infringement requires proof of at least one act of direct infringement, which WiAV cannot do. *BMC Res., Inc. v. Paymentech,*

L.P., 498 F.3d 1373, 1379 (Fed. Cir. 2007). Further, to establish contributory infringement, WiAV must prove that Defendants' accused products have no substantial noninfringing uses. *See* 35 U.S.C. § 271(c) (2008). Here, it is undisputed that Defendants' accused products can be used in 3G networks without ever infringing—and even for 2G networks, they have *eight* alternative modes of operation that do not infringe the Pitch Lag Patents. The use of the other eight modes is hardly "insubstantial." Likewise, WiAV cannot show that any Defendant intended to induce others to use the sole allegedly infringing mode of operation. While the allegedly infringing mode is supported by Defendants' accused products as part of the AMR standard, Defendants were unaware of *any* use of that mode in wireless carriers' networks in the United States. Thus, WiAV cannot show that Defendants intended to cause users of their phones to use that mode or infringe the Pitch Lag Patents.

B. The Defendants Do Not Infringe the '573 Patent.

WiAV asserts that claims 1, 3, 4, and 5 of the '573 patent are infringed by each of Defendants' GSM, EDGE, and WCDMA products through use of a tilt compensation filter within a digital filter called a "postfilter." However, none of Defendants' accused products infringe because each asserted '573 patent claim requires "processing circuitry" that applies "adaptive tilt compensation to the synthesized residual signal based in part on . . . a *flatness of the synthesized residual signal.*" Even assuming that the functionality WiAV accuses meets the Court's construction of the terms "adaptive tilt compensation" and "synthesized residual signal," Defendants' accused products do not compensate tilt based on the flatness of the signal WiAV identifies as the claimed "synthesized residual signal." Instead, even when all of the facts are viewed in WiAV's favor, the measure of flatness identified by WiAV is based on a *synthesized*

speech signal at the output of the formant postfilter, not the residual signal created in the middle of the postfiltering process.

The AMR standard itself makes clear—and all of the experts in the case agree—that the accused measure of flatness is not the flatness of the "residual signal" that WiAV calls a "synthesized residual signal," but instead is the flatness of the synthesized speech signal that is the output of the formant postfilter. Because the measure of flatness that WiAV identifies as meeting all of the asserted claims is not a measure of flatness of a "synthesized residual signal," the asserted claims are not infringed.

C. Defendants' Accused Products Do Not Infringe the Silence Coding Patents.

None of Defendants' accused products infringe the asserted claims of the '606 and '578 patents ("the Silence Coding Patents") because all of those claims require that the selection of the silence coding mode be "independent of the speech coding mode." However, the selection of the silence coding mode by the accused AMR speech codec *depends* on the speech coding mode applied to the prior segment, and is thus not "independent of the speech coding mode." Testing conclusively establishes this dependency, which is further supported by the fact that the AMR speech codec standard identifies a number of speech coding mode-dependent parameters that are used to determine whether the present speech frame should be encoded using the silence coding mode. Because no reasonable jury could conclude that Defendants' accused products select the silence coding mode without any dependence (*i.e.,* "independent of") the prior speech coding mode, summary judgment of non-infringement of the Silence Coding Patents should be granted.

STATEMENT OF UNDISPUTED FACTS

A. Facts Showing the Invalidity of the '493 Patent

1.   The '493 patent claims a specific multi-step process for "selecting a pitch lag value from a plurality of patch lag candidates" (Sommer Decl. Ex. A ('493 pat., 22:10-12)).[1] Each of the asserted claims (claims 5-7, 9, 20-22 and 24) is directed to that pitch lag selection process (*id.*).

2.   A chain of three applications led to the issuance of the '493 patent (Sommer Decl. Ex. A ('493 pat., "Related U.S. Application Data")). Of the three applications in the chain, only the last-filed application—Application No. 11/251,179—describes the claimed pitch lag selection algorithm. That application was filed on October 13, 2005 (*id.*).

3.   To provide support for the claimed pitch lag selection algorithm during the prosecution of the '179 application, the applicant submitted a "preliminary amendment" adding Figures 8 to 9 and the text that would ultimately be included at column 19, line 44 to column 21, line 33 of the '493 patent (Sommer Decl. Ex. B (Prelim. Am.)). That additional disclosure was not included in the text of *either* of the earlier applications in the chain: Application No. 09/154,660 (filed Sept. 18, 1998) and Application No. 09/663,002 (filed Sept. 15, 2000) (Sommer Decl. Exs. C &D (copies of '660 and '002 applications as filed and amended)).

4.   Indeed, WiAV has never contended that the actual text of the 1998 and 2000 applications describe the '493 patent's claimed invention (Sommer Decl. Ex. E (WiAV Response to Defs. Invalidity Contentions at 72)).

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[1] References to the "Sommer Decl." are to the Declaration of Andrew R. Sommer in Support of Defendants' Motion for Summary Judgment that the Asserted Claims of the Patents-in-Suit Are Not Infringed and that the Asserted Claims of the '493 Patent Are Invalid and the '493, '814, '573, '606, and '578 Patents Are Not Infringed,", attached hereto as Exhibit 1.

5.   Instead, WiAV relies on an argument based on "incorporation by reference" (*id.*). For

the earlier 1998 application, WiAV relies on the following language purporting to incorporate

the relevant information by reference:

INCORPORATION BY REFERENCE

The following applications are hereby incorporated by reference in the entirety
and made part of the present application: [FOLLOWED BY A LIST OF 13
PATENT APPLICATIONS]

(Sommer Decl. Ex. C ('660 application at WIAV0040131-32, WIAV0039946-47)). Of the

hundreds of pages from the 13 referenced applications, a select few paragraphs from just two

applications actually disclose the invention ultimately claimed in the '493 patent: 60/097,569 and

09/154,654 (Sommer Decl. Exs. F & G (copies of '569 and '654 applications)).

6.   WiAV has not identified any corresponding incorporation for the intervening 2000

application (the '002 application) (Sommer Decl. Ex. E (WiAV Resp. to Defs. Invalidity

Contentions)). WiAV asserts that the 2000 application "incorporates by reference" the same two

applications as the 1998 applications, *i.e.*, the '654 and '569 applications (*id.*). However, the

'654 application is not even mentioned, and there is no statement incorporating the '569

application by reference (Sommer Decl. Ex. D ('002 application)). Instead, the 2000 application

states:

CROSS REFERENCE TO RELATED APPLICATIONS

The present application is based on U.S. Provisional Application Serial No.
60/097569 (Attorney Docket No. 98RSS325) filed August 24, 1998.

(*Id.*).

7.   In response to a series of requests for admission, WiAV admitted that each and

every feature recited in claims 5-7, 9, 20-22, and 24 of the '493 patent is found in the

'814 patent (Sommer Decl. Ex. I (WiAV's Resp. to Nokia's RFA Nos. 81-88 (asking

WiAV to admit that all elements of each claim are disclosed under WiAV's interpretation

of pitch lag candidates); Summer Decl. Ex. E (WiAV's response to Defs. Invalidity

Contentions). Dr. Gibson's expert report shows how each limitation of the asserted

claims of the '493 patent are present in the '814 patent (Ex. 2 (Gibson Rep.) ¶¶ 522-26 &

Ex. 3)[2] This is not surprising since the applicants took the description necessary to

provide written description to support the asserted claims from the patent application that

issued as the '814 patent years earlier (Summer Decl. Ex. B (Prelim. Am.)).

8.   Therefore, if, as Defendants contend, the '493 patent is entitled to a priority date

no earlier than the 2005 application, then there is no dispute that the '493 patent is invalid

over the '814 patent, which issued on January 14, 2003, more than two years before the

'493 patent's 2005 priority date (Sommer Decl. Ex. H ('814 patent)).

B. Facts Relating to NonInfringement of the Pitch Lag Patents.

9.   When using the AMR codec, Defendants accused products may be configured to use one

of nine possible modes: AMR12.2, AMR10.2, AMR7.85, AMR7.40, AMR6.70, AMR5.90,

AMR5.15, AMR4.75, and SID (silence coding) (Sommer Decl. Ex. J (3GPP TS 26.071 § 4);

Summer Decl. Ex. AC (WiAV's infringement contentions for '814 patent (Motorola) at 2)); Ex.

6 (Polish Rep.) ¶ 40; Ex. 3 (Kabal Rep.) ¶ 44).[3] Which codec is used is dependent on the

network equipment (Ashley Decl. ¶ 3)[4]. Mobile phones are incapable of operating in a codec

mode that is not allotted to it by the network (*id.*). WiAV's infringement theories for the Pitch

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[2] References to the "Gibson Rep." are to "July 19, 2011 Opening Expert Report of Dr. Jerry Gibson Regarding the Validity of U.S. Patent Nos. 6,256,606, 7,120,578, 6,507,814, 7,266,493, & 6,385,573." The Gibson Report is attached hereto as Exhibit 2.

[3] References to the "Polish Rep." and "Kabal Rep." are to "Expert Report of Dr. Nathaniel Polish on Nokia Infringement" and "August 2, 2011 Rebuttal Expert Report of Dr. Peter Kabal Regarding Noninfringement", respectively. The Polish Report is attached hereto as Exhibit 6, and the Kabal Report as Exhibit 3.

[4] References to the "Ashley Decl." is to the "Declaration of James Ashley," which is hereto as Exhibit 5.

Lag Patents are directed only to one mode: AMR10.2 (Sommer Decl. Ex. AC (WiAV's infringement contentions for '814 patent (Motorola)); Summer Decl. Ex. L (Polish Tr. 123:23-124:8 ("I've only offered an opinion with respect to the 10.2 mode of the AMR codec."))). The use of AMR10.2 is very small, and in an unidentified portion of the United States (Sommer Decl. Ex. M (Prise Tr. 10:19-11:7)), and WiAV has no proof that Defendants' accused products *ever* use the AMR10.2 mode.

10.   WiAV has accused all of the Defendants' GSM, EDGE, and WCDMA handsets of infringement and seeks damages for every handset the Defendants have sold in the United States (Sommer Decl. Ex. AC (WiAV's infringement contentions for the '814 patent); Dkt. 510 ¶¶ 44-46, 53-55). The asserted apparatus claims ('814 claims 8-11 and 37, and '493 claims 20-22 and 24) require circuitry that affirmatively performs certain actions (Sommer Decl. Ex. A (claim 20 states "the processing circuitry configured to perform: *identifying . . .* , *determining . . .* , *favoring . . .* , *selecting . . .* , [and] converting"); Summer Decl. Ex. H (claim 8 requires "encoder processing circuit" "*applying* an adaptive weighting factor" and "*selecting* one of the pitch lag candidates")).

11.   AT&T has two types of cellular networks that can support the AMR codec: a 3G network and a 2G network (Sommer Decl. Ex. M (Prise Tr. at 9:9-19, 10:9-10)). AMR10.2 is never used on AT&T's 3G network (*id.* (Prise Tr. 9:6-10:2)). Thus, no accused product would ever place a call on AT&T's 3G network using the sole allegedly infringing mode.

12.   The same is true for the vast majority of domestic 2G networks. AT&T has four network equipment manufacturers that supply equipment for its 2G networks: Nokia, Ericsson, Nokia Siemens, and Nortel (*id.* (Prise Tr. at 11:8-25)). Of these suppliers, AT&T's network using Nokia and Nokia Siemens base stations *does not use AMR10.2* (*id.* (Prise Tr. at 12:2-19)). Thus,

if an accused product is used on AT&T's network equipment provided by Nokia or Nokia

Siemens, the accused functionality would not be used (*id.*). AT&T's network that uses network

hardware from Ericsson uses AMR10.2 "approximately point-018 percent" of the time (*id.* Prise

Tr. at 12:20-13:9)). Three to four percent of AT&T's 2G network includes equipment provided

by Nortel (*id.* (Prise Tr. at 14:2-4). This network equipment uses AMR10.2 twenty percent of

the time in the "uplink" (*i.e.*, from the phone to the network) (*id.* at 13:14-19). Thus, AMR10.2

may be used in 3-4% of AT&T's 2G network about 20% of the time.

13.   There is no evidence in the record about where AMR10.2 mode is actually used within

the United States. For instance, while AMR10.2 might be used 20% of the time in 3-4% of

AT&T's 2G (not 3G) network, the call volume in that geographic area (which WiAV cannot

identify) might be very small if, for instance, it is located in rural areas. There is no evidence

regarding T-Mobile's network operation or the amount of its usage of AMR10.2.

14.   Collectively, Defendants' accused products make up a fraction of the U.S. cellular market

for AT&T and T-Mobile. Indeed, a number of other cellular phone manufacturers sell to AT&T

and T-Mobile, including Apple, LG, Samsung, RIM, and others (Sommer Decl. Ex. N (Nielsen

Market study showing AT&T and T-Mobile purchases from cell phone manufacturers for Q1

2009)). WiAV is unable to prove that any of the accused Motorola, Nokia, or Sony Ericsson

phones have been used in the geographical areas where network equipment that supports

AMR10.2 is located. Indeed, as noted, WiAV cannot even establish where in the United States

the equipment that uses the AMR10.2 mode is located.

15.   Motorola engineers believed, based on their experience, that AMR10.2 was not supported

by GSM, EDGE, and WCDMA networks in the United States (Ashley Decl. ¶ 4). They have no

recollection of observing the use of AMR10.2 (*id.*). Therefore, Motorola did not believe that

AMR10.2 was used in the United States (Sommer Decl. Exs. O, P, Q).

C. Facts Showing Use of the AMR Codec Does Not Infringe the '573 Patent

16.   All asserted claims of the '573 patent (*i.e.*, claims 1 and 3-5), require a "processing

circuit" that applies "adaptive tilt compensation to the synthesized residual signal based in part

on . . . a flatness of the synthesized residual signal (Sommer Decl. Ex. R ('573 pat., 43:6-15).

17.   WiAV accuses a tilt compensation filter that is part of a "postfilter" of infringement.

(Sommer Decl. Ex. S (WiAV's infringement contentions for the '573 patent). The postfilter is a

final stage of processing in the AMR decoder, as shown below:
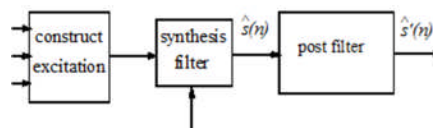
 (Sommer Decl. Ex. T (3GPP TS 26.090, Fig. 4 at p.53)); Ex. 3 (Kabal Rep.) ¶¶ 50-52, 285)).

18.   The AMR postfilter receives a synthesized speech signal from the synthesis filter

(Sommer Decl. Ex. T (3GPP TS 26.090, § 6.1, Fig. 4); Ex. L (Polish Tr. at 199:22-200:5); Ex. 3

(Kabal Rep.), ¶¶ 50, 51, 259)).

19.   The AMR postfilter includes (i) a formant postfilter and (ii) a tilt compensation filter

(Sommer Decl. Ex. L (Polish Tr. at 196:14-19, 197:22-198:9); Summer Decl. Ex. T (3GPP TS

26.090, § 6.2.1)).

20.   The formant postfilter includes two parts: an inverse filter and a synthesis filter (Sommer

Decl. Ex. S (WiAV's infringement contentions for '573 patent)). Thus, there are in essence,

three filter stages in the AMR postfilter: (1) an "inverse filter," which is first in the chain of

filters; (2) a tilt compensation filter, which is second in the chain of filters; and (3) a "synthesis

filter," which is third in the chain of filters. (Sommer Decl. Ex. S (WiAV's infringement

contentions for '573 patent); Summer Decl. Ex. U (Quackenbush Tr. at 282:10-21)[5]; Summer

Decl. Ex. L (Polish Tr. at 205:23-206:3, 207:9-14); Summer Decl. Ex. T (3GPP TS 26.090 §

6.2.1); Ex. 3 (Kabal Rep.), ¶ 262, 331).

21.   The first stage, the inverse filter (which is part of the "formant postfilter"), receives a

synthesized speech signal from the synthesis filter and generates a "residual signal"[6] (Sommer

Decl. Ex. S (WiAV's infringement contentions for '573 patent); Summer Decl. Ex. T (3GPP TS

26.090 § 6.2.1); Summer Decl. Ex. U (Quackenbush Tr. at 282:10-21); Summer Decl. Ex. L

(Polish Tr. at 205:23-206:3, 207:9-14); Ex. 3 (Kabal Rep.), ¶¶ 262, 331).

22.   The tilt compensation filter—*i.e.*, the second filter in the chain—is applied to this

"residual signal" (Sommer Decl. Ex. S (WiAV's infringement contentions for '573 patent)). The

tilt compensation filter "compensates for the tilt in the formant postfilter" (Sommer Decl. Ex. T

(3GPP TS 26.090 § 6.2.1); Summer Decl. Ex. U (Quackenbush Tr. at 285:20-24); Ex. 3 (Kabal

Rep., ¶ 265)). WiAV's infringement contentions identify this filter as performing the claimed

"adaptive tilt compensation" (Sommer Decl. Ex. S (WiAV infringement contentions for '573

patent)).

23.   The second filter (the tilt compensation filter) is calculated using a value "k1 prime" that

is known as the "first reflection coefficient" of the entire formant postfilter (Ex. 3 (Kabal Rep. ¶¶

266, 279(iv), 333-34); Sommer Decl. Ex. T (3GPP TS 26.090 § 6.2.1); Summer Decl. Ex. L

(Polish Tr. 198:17-20; 209:8-20)).

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[5] Although the cited quotes from Dr. Quackenbush in this Motion relate to the formant postfilter in GSM 06.60, the formant postfilter in GSM 06.60 is identical to the formant postfilter used in the AMR standard (Ex. 2 (Gibson Rep.), ¶ 1079 & Ex. 4).
[6] WiAV maintains that this "residual signal" is the "synthesized residual signal." While the parties dispute whether this residual signal is a "synthesized residual signal" under the Court's claim construction, that dispute need not be resolved for the purpose of this motion and the Court may assume that the residual signal is a synthesized residual signal.

24.   WiAV asserts that the use of the variable "k1 prime" satisfies the claim requirement that "adaptive tilt compensation [be] based in part on . . . a flatness of the synthesized residual signal" required by all asserted claims (Sommer Decl. Ex. S (WiAV infringement contentions for '573 patent)).

25.   The sole aspect of the AMR postfilter that WiAV relies on in its infringement contentions to meet the flatness aspect of the claims—*i.e.*, the "first reflection coefficient"—is calculated using the truncated impulse response of the entire formant postfilter—*i.e.*, both the first and third filters in the chain (Sommer Decl. Ex. L (Polish Tr. at 209:21-210:5, 210:11-211:9); Summer Decl. Ex. U (Quackenbush Tr. at 253:20-24, 254:16-21, 286:11-18, 287:5-9); Summer Decl. Ex. W (Kabal Tr. at 116:7-20, 131:15-132:17); Summer Decl. Ex. T (3GPP TS 26.090 § 6.2.1); Ex. 3 (Kabal Rep., ¶¶ 266, 271-73, 279(iii), 329, 332, 334)).

26.   Nowhere in the AMR standards or any supporting document is it stated that the "first reflection coefficient" is calculated using the "residual signal" because it is not; and WiAV's expert Dr. Polish admitted as much (Sommer Decl. Ex. L (Polish Tr. at 213:19-214:8 ("Q. Okay. Is K1 prime calculated based on the residual? . . . A. No. K1 prime is calculated based upon the formant postfilter . . ."); *see also* Sommer Decl. Ex. L (Polish Tr. at 211:3-9); Summer Decl. Ex. U (Quackenbush at 287:10-12); Summer Decl. Ex. W (Kabal Tr. at 131:15-132:17); Ex. 3 (Kabal Rep.), ¶ 271-73, 334).

27.   By using the impulse response of the inverse filter and the synthesis filter (*i.e.*, both parts of the formant postfilter), the tilt compensation filter compensates for tilt introduced by the formant postfilter into the postfiltered speech signal—*i.e.*, the output from the final stage of the formant postfilter (Sommer Decl. Ex. U (Quackenbush Tr. at 291:20-292:7); Summer Decl. Ex. L (Polish Tr. at 213:19-214:8); Ex. 3 (Kabal Rep.), ¶ 335).

28.   Finally, the output of the second filter is passed to the third filter in the chain (the "synthesis filter") (Sommer Decl. Ex. L (Polish Tr. at 207:2-8); Summer Decl. Ex. T (3GPP TS 26.090, § 6.2.1); Summer Decl. Ex. U (Quackenbush Tr. at 284:9-19); Summer Decl. Ex. V (Gibson Tr. at 81:20-82:14); Ex. 3 (Kabal Rep.), ¶¶ 264, 331). The combination of the first filter in the chain and the third filter in the chain is referred to as the "formant postfiler" in the AMR standards (Sommer Decl. Ex. T (3GPP TS 26.090 § 6.2.1)). The output third filter is a postfiltered speech signal (Sommer Decl. Ex. L (Polish Tr. at 207:2-8); Summer Decl. Ex. V (Gibson Tr. at 81:20-82:14); Summer Decl. Ex. T (3GPP TS 26.090 § 6.2.1)). As Dr. Polish acknowledged in his deposition, a speech signal is not a residual signal (Sommer Decl. Ex. L (Polish Tr. 214:9-16, 19-24, 216:2-17 ("an implementation that applied the tilt compensation filter to speech rather than a residual probably wouldn't infringe")).

29.   Although the formant postfilter has two parts, only the second part of the formant postfilter (the synthesis filter) introduces tilt into the postfiltered speech signal (Sommer Decl. Ex. U (Quackenbush Tr. at 284:23-285:19)).

30.   Although applied first, the role of the inverse synthesis filter is to remove a portion of the tilt introduced by the second part of the formant postfilter (*id.* (Quackenbush Tr. at 285:3-19)).

31.   A measure of the tilt introduced to the postfiltered speech signal is thus equal to the amount of tilt introduced in the second filter (the synthesis filter) that was not removed by the first filter (the inverse synthesis filter) (*id.* (Quackenbush Tr. at 284:23-285:19)).

32.   The "k1 prime" first reflection coefficient thus reflects the change to the tilt of the postfiltered speech signal relative to the input speech signal that passed through the formant postfilter (*id.* (Quackenbush Tr. at 284:23-286:5, 289:6-291:4)).

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33.   Defendants' accused products do not apply adaptive tilt compensation based on the

flatness of a synthesized residual signal, but rather they compensate for tilt based on the output

of the second stage of the formant postfilter—*i.e.*, the synthesized speech signal (Sommer Decl.

Ex. L (Polish Tr. at 209:21-210:5, 210:11-211:9); Summer Decl. Ex. U (Quackenbush Tr. at

284:23-286:5, 289:6-291:4); Ex. 3 (Kabal Rep.) ¶ 335).

D. Facts Demonstrating Defendants' Do Not Infringe The Silence Coding Patents

34.   WiAV accuses Defendants of infringing the Silence Coding Patents by implementing the

AMR speech codec in their GSM, EDGE, and WCDMA products (Dkt. 510 ¶¶ 26-28, 35-37).[7]

Every independent claim in these patents requires the selection of "the silence description coding

mode upon the identification of the absence of a substantially speech-like characteristic of the

segment of the speech signal *independent of the speech coding mode applied before the*

segment" (Sommer Decl. Ex. X ('606 pat. 11:1-5 (claim 1), 12:29-32 (claim 16); Summer Decl.

Ex. Y ('578 pat. 11:6-10 (claim 1); *see also* 11:50-53 (claim 14—"coding a second segment of

the speech signal using a silence description coding mode independent of the speech coding

mode used to code the first segment of the speech signal")). During his deposition, Dr. Polish

(WiAV's infringement expert) admitted that the term "selects" is modified by the term

"independent of the speech coding mode" (Sommer Decl. Ex. L (Polish Tr. 221:25-222:5)).

35.   WiAV accuses the Defendants of infringing by "performing 'silence description coding'

in the manner described by the AMR standards," such as "3GPP specification TS 26.071

(v.8.0.0) § 5" (Dkt. 510 at ¶¶ 26, 35). The AMR standard uses "a single low rate noise encoding

mode," in addition to eight different speech coding modes (Sommer Decl. Ex. J (3GPP TS

26.071 at § 4); Dkt. 510-6 at 7). This low rate noise encoding mode models background noise

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[7] claims 1-3, 7, 9, 16, and 17 of the '606 patent and claims 1, 2, and 13-15 of the '578 patents are
asserted (Dkt. 510 at ¶¶ 26, 35).

with parameters that are then transmitted over the air; the decoder receives the transmitted

parameters and uses the parameters to generate noise (*i.e.*, "comfort noise") for the listener

(Sommer Decl. Ex. Z (3GPP TS 26.092 § 4 (describing the estimation of comfort noise

parameters and transmission to receiver)). The units of information that are transmitted in the

low rate encoding mode are called "SID frames" (*id.* at § 3.1 ("SID frames: special Comfort

Noise frames. It may convey information on the acoustic background noise or inform the

decoder that it should also start generating background noise.")).

36.   The selection of the silence coding mode is determined on a frame-by-frame basis by an

algorithm called a "voice activity detector" or "VAD" (Sommer Decl. Ex. AA (3GPP TS 26.093

§ 5.1.2.1 ("The Voice Activity Detector (VAD) shall operate all the time in order to assess

whether the input signal contains speech or not."); Ex. W (Kabal Tr. 74:5-16)). There are two

VAD options in AMR: VAD Option 1 ("VAD1") and VAD Option 2 ("VAD2") (Sommer Decl.

Ex. AB (3GPP TS 26.094 § 1); Ex. 6 (Polish Rep.) ¶¶ 43, 44)). The accused products use either

VAD Option 1 or VAD Option 2 (Ex. 6 (Polish Rep.) ¶¶ 42-44). Both VAD Options serve the

same purpose: to select whether a frame "contains speech or not" and, if not, to select the low bit

rate silence coding mode (after an 8 frame hangover period) (Sommer Decl. Ex. AA (3GPP TS

26.093 § 5.1.2.1)).

37.   ██

██

██

38.   Dr. Polish retracted his opinion during his deposition and admitted that the decision

performed by the VAD software does in fact depend on the mode used to code the prior speech

segments (Sommer Decl. Ex L (Polish Tr. 222:7-17 (acknowledging that "when you decide that its silence or not depends on the data")).

39.   Defendants' expert, Professor Peter Kabal, conducted testing of the standardized AMR speech codec and demonstrated conclusively that the selection of the silence coding mode was directly influenced by which coding mode was used previously (Ex. 3 (Kabal Rep.) ¶¶ 185-197)). Dr. Kabal built the standard AMR speech codec by compiling the source code provided as part of the AMR standard using VAD Option 1 (*id.* at ¶¶ 188-193). Dr. Kabal then applied the same input speech file to the codec when the codec was operating first at a rate of 12.2 kbit/s and then at a rate of 4.75 kbit/s (*id.* at ¶ 188). Dr. Kabal's test results show that the silence coding mode is selected at different points for the same input signal depending on whether the AMR speech codec was configured to operate at 4.75 kbit/s or 12.2 kbit/s (*id.* at ¶¶ 185-197)).

40.   Dr. Kabal verified his test results by examining, for the same input file, two of the output files provided with the AMR standard for verifying that a codec is standard compliant (Ex. 3 (Kabal Rep.) ¶¶ 188-89). Dr. Kabal plotted the two AMR output files into the figure below, in which the coding mode for the previous frame is 12.2 kbit/s (in green) or 4.75 kbit/s (in blue):
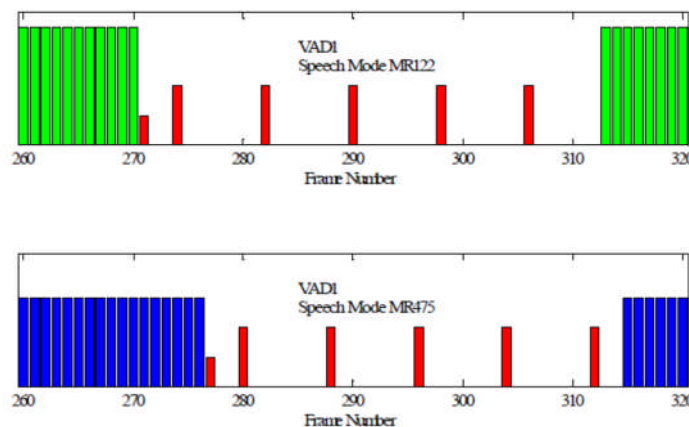
(Ex. 3 (Kabal Rep.) ¶ 192).

41.   The large green and blue bars represent coded speech frames, the short red bars represent

the first coded silence frame (called "SID_FIRST"), and the larger red bars represent frames that

include comfort noise parameters (called "SID_UPDATE" frames) (Ex. 3 (Kabal Rep.) ¶ 192)).

The graphs above show that the silence coding mode is selected at different points in time for the

same speech signal dependent on what the prior speech coding mode was (*id*. at ¶ 193). For

example, when the previous speech coding mode was MR122, the codec selected the silence

mode for frame 271, whereas when the previous speech coding mode was MR475, the silence

mode was not selected until frame 277 (*id*. at ¶¶ 192-93).

42.   Dr. Kabal repeated his tests for the use of the standardized AMR speech codec using

VAD2 and saw the same dependency between the speech coding mode and the selection of the

silence coding mode:
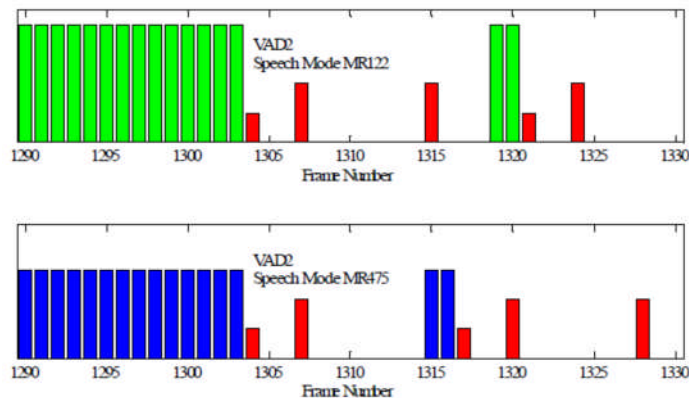
(*Id.* ¶¶ 194-196).

43.   These tests applied the same input file as for the tests of VAD 1, above, but since the

standard does not include an output file for VAD 2, his results above are based on his

observations of the dependency between the selection of the silence coding mode and the prior

speech coding mode (*id*. at ¶¶ 194-96). As can be seen from the plots above, the silence coding

mode is selected for different frames depending on what the previous coding mode was (*id*.).

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These tests establish that Defendants' accused products do not select the "silence description coding mode . . . independent of the speech coding mode applied before the segment," as required by the asserted independent claims. Indeed, Dr. Polish, WiAV's expert, admitted that Dr. Kabal's test "results don't surprise" him, and that he had not "tried to reproduce his results" but that he had seen "nothing to lead [him] to believe [Dr. Kabal's] results were wrong" (Sommer Decl. Ex. L (Polish Tr. 240:15-241:2)).

44.   The dependency between the selection of the silence coding mode and the particular coding mode applied to the previous frames is due to the parameters that are used to select the silence coding mode, which include the open loop pitch lag value (Ex. 3 (Kabal Rep.) ¶¶ 178-79 ("[T]he background noise estimate in VAD1 and VAD2 is based on values calculated in the open loop pitch analysis for the previous frame"); Sommer Decl. Ex. T (3GPP TS 26.090 § 5.1 (describing different pitch lag calculations for different coding modes)); Summer Decl. Ex. AB (3GPP TS 26.094 §§ 3 & 4 (describing parameters used to decide whether to indicate whether a frame should be coded as speech or silence)). These parameters will "vary based on the speech coding mode of" the prior speech frame, making the selection of the silence coding mode dependent on the previous speech coding mode (Ex. 3 (Kabal Rep.) ¶¶ 178-79; Sommer Decl. Ex. W (Kabal Tr. 68:16-70:17)).

45.   Dr. Polish also admitted that, in the AMR standard, the silence coding mode will not be selected unless the VAD indicated that the input signal was silence (Sommer Decl. Ex. L (Polish Tr. 242:10-17); *accord id.* Ex. W (Kabal Tr. 76:7-11)). This admission by WiAV's infringement expert again establishes that the selection of the silence coding mode in the AMR standard is based on the previous speech coding mode, as demonstrated by the input and output files provided with the AMR standard and Dr. Kabal's testing (Ex. 3 (Kabal Rep.) ¶¶ 183-197).

ARGUMENT

A. Summary Judgment Standard

Summary judgment is proper when "there is no genuine dispute as to any material fact" and "the moving party is entitled to a judgment as a matter of law." Fed. R. Civ. P. 56; *see Celotex Corp. v. Catrett*, 477 U.S. 317, 322 (1986). In certain circumstances—such as the situation presented here—summary judgment of invalidity is proper where the only dispute is the filing date to which the patent is entitled under 35 U.S.C. § 120. *See Ledergerber Med. Innovations, LLC v. W.L. Gore Assocs., Inc.*, 736 F. Supp. 2d 1172, 1179 (N.D. Ill. 2010) (granting summary judgment of invalidity where later-filed patent was not entitled to earlier filing date because of failure to comply with requirements for claiming priority). Given WiAV's admissions regarding the disclosure of the '814 patent, entry of summary judgment in favor of the Defendants is appropriate now on this point.

Moreover, where a party bears the burden of proof on an issue, such as WiAV does on the issues of direct and indirect infringement, and no reasonable jury could find in favor of WiAV, summary judgment of non-infringement is proper. "To establish infringement of a patent, every limitation set forth in a claim must be found in an accused product or process exactly or by a substantial equivalent." *Johntson v. IVAC Corp.*, 885 F.2d 1574, 1577 (Fed. Cir. 1989). The conclusory statements of an expert cannot raise material facts to preclude summary judgment. *See, e.g.*, *Phillips Petroleum Co. v. Huntsman Polymers Corp.*, 157 F.3d 866, 876 (Fed. Cir. 1998). Because WiAV cannot carry its burden of showing infringement of the Pitch Lag Patents, the '573 patent, or the Silence Coding Patents, summary judgment of noninfringement is proper as to those patents now.

B. The Asserted Claims of the '493 Patent Are Only Entitled to a Filing Date of October 15, 2005, and are Therefore Invalid as Anticipated

To avoid anticipation over the '814 patent, WiAV must establish that the '493 patent is entitled to priority based on one of the two applications filed before 2005. But it cannot, because the claimed invention was not disclosed in the 2000 application.

As the Federal Circuit has explained, "in order for [a] patent to be entitled to priority from [an earlier patent], *continuity of disclosure must have been maintained* throughout a chain of patents from the [earlier] patent leading up to the [later] patent." *Zenon Envt'l, Inc. v. United States Filter Corp.*, 506 F.3d 1370, 1378 (Fed. Cir. 2007) (emphasis added). The relevant subject matter must have "been disclosed *in every intervening application* relied upon to establish a chain of copendency." *Dart Indus. v. Banner*, 636 F.2d 684, 689 (C.A.D.C. 1980) (emphasis added). Thus, for priority to reach back to an earlier application in a chain "*each application in the chain* leading back to the earlier application must comply with the written description requirement of 35 U.S.C. § 112." *Lockwood v. Am. Airlines, Inc.*, 107 F.3d 1565, 1572 (Fed. Cir. 1997); *accord Ledergerber Med. Innovations, LLC v. W.L. Gore & Assocs., Inc.*, 736 F. Supp. 2d 1172, 1178 (N.D. Ill. 2010) ("[I]n order for the last patent application in a series of any length to be entitled to the priority date of the parent application, continuity of disclosure of the claimed invention must be maintained through the chain of patents leading up to the patents-in-suit.").

Here, the chain was indisputably broken because, as WiAV admits, the claimed invention was not expressly disclosed in the 2000 application (Statement of Undisputed Facts ("SUF") ¶ 4). WiAV resorts instead to arguing that the invention was *indirectly* disclosed based on a purported "incorporation by reference" argument. That argument presents an issue of law that should be resolved on summary judgment. As the Federal Circuit has explained, "[w]hether and

to what extent material has been incorporated by reference into a host document is a question of

law." *Advanced Display Sys., Inc. v. Kent State Univ.*, 212 F.3d 1272, 1283 (Fed. Cir. 2000).

The 2000 application's mere reference to the '569 application does not meet the legal

standard for incorporation by reference. "Incorporation by reference 'provides a method for

integrating material from various documents into a host document ... by citing such material in a

manner that makes clear that the material is effectively part of the host document as if it were

explicitly contained therein.'" *Zenon Envt'l,* 506 F.3d at 1378. For material to be deemed

incorporated by reference, "the host document must identify with *detailed particularity* what

specific material it incorporates and clearly indicate where that material is found in the various

[referenced] documents." *Id.* Critically, as the Federal Circuit's predecessor fully explained in a

holding that is directly on point:

> [T]he statement that an application is a continuation-in-part, or a continuation, or a division, or in part a continuation of another application is in a broad sense a "reference" to the earlier application, but a mere *reference* to another application, or patent, or publication is not an *incorporation* of anything therein into the application containing such reference for the purposes of the disclosure required by 35 U.S.C. § 112. . . .   As the expression itself implies, the purpose of "incorporation by reference" is to make one document become a part of another document by referring to the former in the latter *in such a manner* that it is apparent that the cited document is part of the referencing document as if it were fully set out therein.

Application of De Seversky, 474 F.2d 671, 674 (Ct. Cust. & Pat. App. 1973) (emphasis

added). The law remains the same today, as the Federal Circuit recently confirmed: a "*mere*

reference to another application, or patent, or publication without particular identification of

specific material, however, is not an incorporation of anything therein ...." *Callaway Golf Co. v.*

Acushnet Co., 576 F.3d 1331, 1346 (Fed. Cir. 2009) (emphasis added).

But that is all the 2000 application does: it contains a "mere reference" to the '569

application, never stating or implying that it was *incorporated* by reference (SUF ¶ 6). That is

insufficient as a matter of law for incorporation by reference. Therefore, the '493 patent priority date is no earlier than 2005.

Because the '493 claims are not entitled to a filing date before October 2005, the '814 patent anticipates the '493 patent under 35 U.S.C. § 102(b). In order to anticipate a claim, a single prior art reference must disclose every element of the claim. *See Crown Packaging Tech., Inc. v. Ball Metal Beverage Container Corp.*, 635 F.3d 1373, 1383 (Fed. Cir. 2011). Here, WiAV has admitted that the '814 patent discloses every element of the asserted claims of the '493 patent (SUF ¶ 7). This is no surprise. As Dr. Gibson, Defendants' expert on invalidity, explains: "Although the family history of the '814 and 493 Patents is convoluted, both are directed to the same purported improvement in pitch lag selection and the inventor, assignee, and subject matter of the patents are identical" (*id.*). Indeed, the preliminary amendment used to bring subject matter into the '493 patent to support the asserted claims was taken directly from the specification of the patent application that became the '814 patent (*id.*). Thus, as shown in Dr. Gibson's report, all elements of the '493 patent are disclosed in the '814 patent. Because these facts are undisputed, the '493 patent is invalid under 35 U.S.C. § 102(b), and summary judgment is appropriate at this time.

C. WiAV Cannot Show Any Of Defendants' Accused Products Have Ever Been Used in the AMR10.2 Coding Mode

1. WiAV Must Show that AMR10.2 is Used by the Accused Products to Show Direct Infringement By Anyone

To prove direct infringement of the method and apparatus claims of the pitch lag patents by Defendants, WiAV must show that Defendants have used the accused products in the AMR10.2 mode, the only mode of operation that is accused of infringing these asserted claims. To show that users of Defendants products have directly infringed, WiAV must show that the

end-users have used the products in the AMR10.2 mode. For the method claims,[8] WiAV must show that the methods have actually been performed, not simply that the devices are capable of performing the accused methods. *See Ormco Corp. v. Align Tech., Inc.*, 463 F.3d 1299, 1311(Fed. Cir. 2006) ("Method claims are only infringed when the claimed process is performed, not by the sale of an apparatus that is capable of infringing use.").

Likewise, for the apparatus claims, WiAV must also present proof that each of the accused phones have been used in the accused AMR10.2 mode. Federal Circuit law is clear: "Unless the claim language only requires the capacity to perform a particular claim element, we have held that it is not enough to simply show that a product is capable of infringement; the patent owner must show evidence of specific instances of direct infringement." *Fujitsu Ltd. v. Netgear Inc.*, 620 F.3d 1321, 1329 (Fed. Cir. 2010).

Here, all of the asserted apparatus claims *require* the device to perform the accused AMR10.2 algorithms for the claim elements to be satisfied even accepting WiAV's application of the claims on AMR10.2 as true (SUF ¶ 10).[9] Asserted claim 8 from the '814 patent requires an "encoder processing circuitry *applying* an adaptive weighting factor . . ." and "the encoder processing circuit *selecting* one of the pitch lag candidates" (*id.*). These limitations require the processing circuit to affirmatively perform the actions of "applying" and "selecting" and do not cover devices that are merely capable of doing so (*id.*). Asserted claim 20 from the '493 patent also includes language that requires the accused circuit to perform specific acts: "the processing circuitry configured to perform: *identifying . . . , determining . . . , favoring . . . , selecting . . . ,*

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[8] WiAV asserts the following method claims from the '814 patent: 16-19, 21, 24, and 27. WiAV asserts the following method claims from the '493 patent: 5-7 and 9.

[9] WiAV asserts apparatus claims 8-11 and 37 from the '814 patent. WiAV asserts apparatus claims 20-22 and 24 from the '493 patents.

[and] *converting*" (*id.*). Because claim 8 of the '814 patent and claim 20 of the '493 patent require these limitations, so too do all of the asserted dependent claims. *See* 35 U.S.C. § 112, ¶ 4 (2008). Thus, for Defendants to have directly infringed, they must have used the accused products in the AMR10.2 mode. For Defendants to have indirectly infringed, WiAV must show, among other things, that some third party has used Defendants' products in the accused AMR10.2 mode.

2. WiAV Cannot Show That A Single One of Defendants' Accused Products Has Ever Been Used In A Direct Infringement

WiAV cannot meet its burden to show that any of the Defendants' accused products have been used to implement the algorithms accused of infringing the Pitch Lag Patents—by Defendants (direct infringement) or any cellular subscriber (indirect infringement). "In order to prove direct infringement, a patentee must either point to specific instances of direct infringement or show that the accused device necessarily infringes the patent in suit." *ACCO Brands, Inc. v. ABA Locks Mfrs. Co., Ltd.*, 501 F.3d 1307, 1313 (Fed. Cir. 2007); *Dynacore Holdings Corp. v. U.S. Philips Corp.*, 363 F.3d 1263, 1275-76 (Fed. Cir. 2004). Defendants' accused products support seven AMR speech coding modes and a silence coding mode, in addition to the accused mode (*see* SUF ¶ 9), and thus do not "necessarily" infringe the pitch lag patents. *ACCO*, 501 F.3d at 1313. Accordingly, WiAV must show "specific instances of direct infringement." *Id.*

This WiAV cannot do. WiAV does not have evidence that Defendants have used the AMR10.2 mode on the carriers' networks. Moreover, WiAV simply cannot show that any of the accused products have ever been used by cellular subscribers with a network that was using the AMR10.2 mode in the United States. The AMR10.2 mode is *never* used in the AT&T's 3G network, and is available only on a tiny 3 to 4% of AT&T's 2G network and then used only 20%

of the time (SUF ¶¶ 11-12), and a mere "point-018 percent" in AT&T's Ericsson-based network (SUF ¶ 12). But WiAV can offer no evidence that any of Defendants' accused products—making up less than a third the relevant US cellular market for GSM, EDGE, and WCDMA communications purchased in the first quarter of 2009 (SUF ¶ 14)—were *ever* used in that AMR10.2 mode, particularly because WiAV cannot even identify *where* in the United States the AMR10.2 mode is available or what percentage of cellular activity takes place in that small slice of AT&T's network. Moreover, there is no evidence that T-Mobile's network—the only other major wireless carrier that uses GSM, EDGE, and WCDMA—*ever* uses AMR10.2 (SUF ¶ 13).

The mere fact that a few geographical regions of the United States may be serviced by AT&T network equipment that can allocate the AMR10.2 mode to a mobile phone is insufficient to avoid summary judgment. Not only must WiAV show that accused products were sold in a geographic area of the U.S. (or were taken there), but that those products were used in a phone call during a time when the AMR10.2 mode was allocated to the handset by the network (SUF ¶¶ 11-12). This series of inferences are insufficient to create a genuine issue of material fact. *See Ennis v. Nat'l Assoc. of Bus. & Educ. Radio, Inc.*, 53 F.3d 55, 62 (4th Cir. 1995) ("The building of one inference upon another will not create a genuine issue of material fact."). Moreover, WiAV has made no effort to provide any analysis of these statistics to be able to present competent evidence of any direct infringements. *Cf. ACCO Brands*, 501 F.3d at 1313 (finding judgment as a matter of law of no infringement was warranted where plaintiff failed to provide witness testimony or surveys of actual users of the accused product to show direct infringement).

In sum, WiAV cannot prove that the accused products are used in the AMR10.2 mode, either by the Defendants or the end users of their products. Thus, summary judgment of noninfringement should be granted in Defendants' favor.

3. WiAV's Indirect Infringement Allegations Also Fail

WiAV accusations of indirect infringement (contributory infringement and inducement of infringement) also fail. Indirect infringement requires "a finding that some party amongst the accused infringers has committed the entire act of direct infringement." *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1379 (Fed. Cir. 2007). Because WiAV cannot show that anyone has used any of the accused products in the AMR10.2 mode in the United States, WiAV cannot meet its burden of proving indirect infringement either. *See Wordtech Sys., Inc. v. Integrated Networks Solutions, Inc.*, 609 F.3d 1308, 1317 (Fed. Cir. 2010).

WiAV's indirect infringement theories also fail for other reasons. For contributory infringement, the governing statute requires WiAV to prove that the accused products have no substantial noninfringing use. 35 U.S.C. § 271(c); *see Arris Grp., Inc. v. British Telecoms. PLC*, 639 F.3d 1368, 1376 (Fed. Cir. 2011). Noninfringing uses are "substantial when they are not unusual, far-fetched, illusory, impractical, occasional, aberrant or experimental." *Vita-Mix Corp. v. Basic Holding, Inc.*, 581 F.3d 1317, 1327 (Fed. Cir. 2009). Here, the Defendants' accused products have substantial noninfringing uses, including use in 3G networks where AMR10.2 mode is indisputably not available, in the 96 to 97% of AT&T's network where AMR10.2 mode is indisputably not available, and in seven speech coding modes other than the miniscule portion of AT&T's network where AMR10.2 may be made available for mobile phones (SUF ¶¶ 9-12). As a result, WiAV cannot prove contributory infringement as a matter of law.

Nor can WiAV prove inducement of infringement. The codec mode used on a particular handset is determined by the network, not the phone (SUF ¶ 9). For instance, Motorola was (and remains) unaware that a small portion of AT&T's network supports the AMR10.2 mode (SUF ¶ 15). WiAV has no evidence that any of the Defendants were even aware that the AMR10.2

mode has been used by carriers within the United States. Further, WiAV has no proof that any

of the Defendants encouraged (*i.e.*, induced) the use of the AMR10.2 mode, as opposed to any

other coding modes. Because Defendants' accused products have substantial non-infringing uses

(SUF ¶¶ 9, 11-12), "an intent to induce infringement cannot be inferred even when defendant has

actual knowledge that some of its users may be infringing the patent." *Vita-Mix*, 581 F.3d at

1329 (quoting *Warner-Lambert Co. v. Apotex Corp.*, 316 F.3d 1348, 1365 (Fed. Cir. 2003)). In

the absence of instructions or other acts of encouragement of use of the accused AMR10.2 mode,

WiAV's allegations of inducement of infringement must fail. *See Vita-Mix*, 581 F.3d at 1328-29

(holding summary judgment of no induced infringement was proper even though accused

infringer knew of the patent and knew of potentially infringing use where there was no evidence

of encouragement of the alleged infringing use by the accused infringer).

D. The '573 Patent Is Not Infringed Because The Accused Products Do Not Apply Adaptive Tilt Compensation Based On The Flatness Of A Synthesized Residual Signal

The Asserted Claims of the '573 Patent all require applying adaptive tilt compensation

based on the flatness of the synthesized residual signal (SUF ¶ 16). Based on WiAV's

infringement contentions and expert reports, the accused "synthesized residual signal" is the

"residual signal r̂(n)" in the AMR postfilter (SUF ¶ 21).[10] Defendant's accused products,

however, do not calculate or otherwise rely on the flatness of the *residual signal* and do not

apply any tilt compensation based on the flatness of the residual signal (*see* SUF ¶ 32-33).

Rather, as WiAV recognizes in its Infringement Contentions, the AMR codec postfilter applies

tilt compensation using the "first reflection coefficient" of the formant postfilter—the only

measurement WiAV accuses of satisfying the flatness limitation of the claims (SUF ¶ 25).

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[10] WiAV has only presented a literal infringement theory for this limitation. Therefore, the doctrine of equivalents need not be addressed.

It is undisputed that the first reflection coefficient is calculated on the entire formant postfilter and reflects the tilt introduced by the entire filter (SUF ¶ 26). It is undisputed that the first reflection coefficient K1 prime does not reflect the flatness of the residual signal WiAV says is the "synthesized residual signal" (SUF ¶¶ 26, 33). WiAV's expert on infringement, Dr. Polish, admitted this fact during his deposition: "Q: . . . Is K1 prime [the variable for the first reflection coefficient] calculated based on the residual? . . . A. No. K1 prime is calculated based upon the formant postfilter . . ." (SUF ¶ 26). This dispositive admission was necessary because the first reflection coefficient estimates the amount of tilt introduced into the postfiltered speech signal—not the residual signal (SUF ¶¶ 25-26, 33). Specifically, the first reflection coefficient is a measure of the change to the tilt of the input into the postfilter (*i.e.*, the synthesized speech signal (in blue below)) and the output of the postfilter (*i.e.*, a postfiltered speech signal (in red below)) (SUF ¶ 17, 25-27, 31-32).
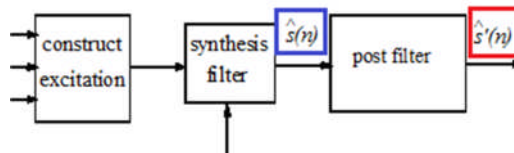
(SUF ¶ 26, 33). The first reflection coefficient is thus not calculated based on the residual signal (SUF ¶ 24-26). Further, the first reflection coefficient does not indicate the tilt introduced by the filter that generates the residual signal (SUF ¶¶ 26-27).

Even under WiAV's infringement theories—and as admitted by WiAV's infringement expert—tilt compensation in the AMR postfilter is based on flatness of the postfiltered synthesized speech signal, not the flatness of the signal WiAV calls the "synthesized residual signal" (*id.*) Thus, no claim of the '573 patent is infringed.

E. Defendants' Accused Products Do Not Infringe the Silence Coding Patents Because They Do Not Select a Silence Coding Mode Independent of the Speech Coding Mode Applied Previously

Defendants do not infringe any asserted claim of the Silence Coding Patents because no accused product selects the silence coding mode "independent of" the speech coding mode applied to the prior speech frames (SUF ¶¶ 36-45). "To establish literal infringement, all elements of the claims, as correctly construed, must be present in the accused system." *TechSearch, LLC v. Intel Corp.*, 286 F.3d 1360, 1371 (Fed. Cir. 2002) (quoting *Cole v. Kimberly-Clark Corp.*, 102 F.3d 524, 524 (Fed. Cir. 1996)). "Where a claim does not read on an accused device exactly, there can be no literal infringement." *Johnston v. IVAC Corp.*, 885 F.2d 1574, 1580 (Fed. Cir. 1989). Here, the Court interpreted the phrase "independent of the speech coding mode" to "mean just that" (Dkt. 628 at 4). Applying the plain language of each asserted claim, the undisputed facts show that the selection of the silence coding mode *is dependent* on which speech coding mode is used to code the previous segment of speech (SUF ¶¶ 34-45).

The undisputed facts show that the AMR silence coding mode can only be selected if the VAD identifies that an input signal frame is non-speech (SUF ¶¶ 38-45). It is undisputed that the VAD process is driven by mathematical calculations that rely on parameters from the *prior* speech coding mode (SUF ¶ 44). Because the VAD calculations are dependent on parameters that differ for different speech coding modes, the selection of the silence coding mode *is dependent* on which speech coding mode was applied to the previous segment of speech (*id.*). This was demonstrated by Dr. Kabal.

Dr. Kabal tested the standardized AMR codec using both of the VAD options (SUF ¶ 39-43). As shown in the plots above, the selection of the silence coding mode for the exact same input data was dependent on the coding mode applied to the previous speech segment (SUF ¶¶

-29-

40-43). Whether or not silence was selected for a segment depended on the speech coding mode

applied to the previous speech segment (SUF ¶¶ 40-43). The results are undisputed, and

conclusively demonstrate that the accused AMR speech codec selects the silence coding mode

dependent on the prior speech coding mode (SUF ¶ 43). Indeed, Dr. Polish, WiAV's expert,

admitted that Dr. Kabal's test "results don't surprise" him, and that he had not "tried to

reproduce his results" but that he had seen "nothing to lead [him] to believe [Dr. Kabal's] results

were wrong" (*id.*). The dependence in the selection of the silence coding mode in the accused

products is the antithesis of the claimed invention, which requires independent selection.

Therefore, Defendants' accused products do not infringe any of the asserted claim of the Silence

Coding Patents.

<div align="center">

CONCLUSION

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For all of the foregoing reasons, Defendants respectfully submit that their motion for

summary judgment should be granted.

Dated: August 22, 2011   Respectfully submitted,

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<u>CERTIFICATE OF SERVICE</u>

I hereby certify that on the 22nd day of August, 2011, I will electronically file the

foregoing **Defendants' Memorandum in Support of TheirMotion for Summary Judgment**

That the Asserted Claims of the '493 Patent Are Invalid and the Asserted Claims of the

Patents-in-Suit Are Not Infringed with the Clerk of Court using the CM/ECF system, which

will then send a notification of such filing (NEF) to counsel of record.

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